

Attorney Docket No.: PENN-0708
Inventors: Greene et al.
Serial No.: 09/624,946
Filing Date: July 25, 1999
Page 3

REMARKS

Claims 1-11 are pending in the instant application. Claims 1-4 have been withdrawn from consideration by the Examiner and subsequently canceled without prejudice by Applicants. Claims 5-11 have been rejected. Claims 5 and 7 have been amended. No new matter has been added by these amendments. Reconsideration is respectfully requested in light of these amendments and the following remarks.

I. Finality of Restriction Requirement

The Examiner has made final the Restriction Requirement mailed July 5, 2001. Accordingly, in an earnest effort to advance the prosecution of this case, Applicants have canceled claims 1-4 without prejudice. However, in light of the finality of this Restriction Requirement, Applicants reserve the right to file a divisional application to the canceled subject matter.

II. Rejection of Claim under 35 U.S.C. § 103

The Examiner has maintained the rejection of claims 5,6 and 8-11 under 35 U.S.C. § 103(a) as being unpatentable over Suzuki et al. in view of Skerra et al. The Examiner has also maintained the rejection of claim 7 under 35 U.S.C. § 103 as being unpatentable over Suzuki et al. in view of Skerra, as applied to

Attorney Docket No.: PENN-0708
Inventors: Greene et al.
Serial No.: 09/624,946
Filing Date: July 25, 1999
Page 4

claims 5-6 and 8-11, and further in view of Quentin-Millet et al. Arguments presented in the response filed November 5, 2001 were found unpersuasive. Specifically, the Examiner suggests that the amendments to claim 8 did not clarify claims 5, 6 and 7 with respect to the Fv fragment which is a single heavy or light chain Fv attached to an oligonucleotide or to a constrained epitope. Further, the Examiner suggests that claims 5, 6 and 7 are not directed to a quantitative method.

Accordingly, in an earnest effort to advance the prosecution of this case, Applicants have amended claim 5 to specify that the system is for quantifying molecules expressing a selected epitope and that the epitope detector consists of a single chain Fv for the selected epitope or a constrained epitope specific CDR either of which have been modified to allow for attachment of oligonucleotides. Claim 7 has also been amended to conform with the amendments to claim 5. Support for these amendments can be found throughout the specification. For example, see page 3, lines 20-26 or page 5, lines 8-10, and page 4, lines 12-17, respectively.

As discussed in detail in the response filed November 5, 2001, neither Suzuki et al., Skerra et al., nor Quentin-Millet et al. teach a quantitative method for detection of molecules via

Attorney Docket No.: PENN-0708
Inventors: Greene et al.
Serial No.: 09/624,946
Filing Date: July 25, 1999
Page 5

RNA amplification using an epitope detector consisting of a single heavy chain or a light chain Fv for a selected epitope attached to an oligonucleotide or a constrained epitope specific CDR attached to an oligonucleotide. Instead, Suzuki et al. teaches use of whole antibodies in a method involving DNA amplification which has no direct correlation between the amount of signal and the amount of protein present. Skerra et al. teaches an expression system for production of functional Fv fragments in *E. coli*. Quentin-Millet et al. teach detection of an antigen by ELISA using anti-filamentous hemagglutinin antibody.

Accordingly, the cited combinations of references fail to teach the limitations of claim 5 as amended, and claims 6 and 7 which depend therefrom, as required to render these claims obvious.

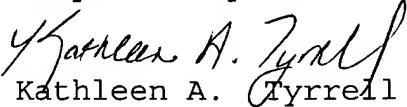
Withdrawal of these rejections under 35 U.S.C. § 103 is therefore respectfully requested.

III. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited. A page has been attached hereto

Attorney Docket No.: PENN-0708
Inventors: Greene et al.
Serial No.: 09/624,946
Filing Date: July 25, 1999
Page 6

which shows the changes made to the claims and specification and
is labeled "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Respectfully submitted,

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Attorney Docket No.: PENN-0708
Inventors: Greene et al.
Serial No.: 09/624,946
Filing Date: July 25, 1999
Page 7

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please cancel claims 1-4 without prejudice.

Please amend the claims as follows:

5. (amended) A system for ~~the detection of~~ quantifying molecules expressing a selected epitope comprising:

(a) a selected surface on which a molecule expressing a selected epitope is or can be immobilized; and

(b) an epitope detector ~~comprising~~ consisting of a single heavy or light chain Fv for the selected epitope or a constrained epitope specific CDR either of which have been modified to allow for attachment of oligonucleotides.

7. (amended) The system of claim 5 wherein the epitope detector ~~comprises~~ is a universal epitope detector which detects a general epitope.